

## CHAPTER 115. INTRODUCTION TO PART 137 RELATED TASKS

**1. AGRICULTURAL AIRCRAFT OPERATIONS.** Title 14 of the Code of Federal Regulations (14 CFR) part 137 is applicable to all operators conducting agricultural aircraft operations. The definition of the term agricultural aircraft operation in 14 CFR part 137 § 137.3 includes forest fire-fighting activities, e.g., fire bombers or tankers. Anyone conducting such activities is required to obtain or have an Agricultural Aircraft Operator Certificate. The exceptions are certificated external-load operators dispensing only water and public aircraft (defined in 14 CFR part 1).

**2. PUBLIC EMERGENCIES.** Title 14 CFR § 137.1 (b) allows certificated agricultural operators to deviate from part 137 for relief and welfare activities during public emergencies.

*A. Definition of Public Emergency.* The term public emergency as used in part 137 means an emergency requiring relief in the public interest. The emergency is of such magnitude that if immediate action were not taken, life, property, or the economic welfare of a substantial portion of a population or a significant geographic area would be jeopardized by the circumstances of that emergency. The determination of a public emergency is made by an agency of the U.S., a state, or local government. Any situation which is solely a matter of convenience or economic advantage to the operator is not deemed to be a public emergency.

*B. Deviation from part 137 in Event of Public Emergency.* If an operator deviates from part 137, he or she shall complete the report required by 14 CFR § 137.1(c).

**3. DEFINITION OF AGRICULTURAL AIRCRAFT OPERATION.** An agricultural aircraft operation means the operation of an aircraft for the purpose of dispensing any economic poison; dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control; or engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation.

*A. Economic Poisons.* An economic poison is any substance or mixture of substances intended for

preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, viruses, other forms of plant or animal life, and anything declared by the Secretary of Agriculture to be a pest. Viruses on or in living man or other animals are excepted. Also, an economic poison is any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

*B. Live Insects.* The dispensing of live insects is not included in this definition.

### 4. MINIMUM EQUIPMENT LIST (MEL).

*A.* Most manufacturers of restricted category aircraft used in agricultural operations have not developed or requested approval for a Master MEL (MMEL). Operators of such aircraft are limited in the choice of documents for such aircraft; however, an operator of a single-engine turbine-powered agricultural aircraft may use the generic MMEL shown in the MMEL sub-system. Operators who may wish to use this document will be required to develop a usable MEL for their own use based on the generic format, providing "M" and "O" items that they develop for their own operation.

*B.* No provisions are currently listed in part 137 for the use of an MEL by part 137 operators. Operations inspectors may follow the MEL approval process for part 137 operators that is used for 14 CFR part 91 operations (i.e. approval of an MMEL for use as an MEL by means of a letter of authorization). When Operations Specifications Subsystem (OPSS) are fully developed for part 137 operators, those documents will reflect the MEL authorization and use.

**5. PESTICIDE HOTLINE.** The following hotlines are available for answering pesticide questions:

*A.* The National Pesticide Telecommunications Network operates a toll-free hotline, 1-800-858-PEST, which is staffed 7 days a week, from 6:30 a.m. to 4:30 p.m., PST. Qualified personnel are available to answer questions about pesticides. Information can be obtained about treatment by a physician after contamination or suspected contamination. The location of the nearest poison control center, clean-up of a pesticide spill, and other related information is

also available on the Internet at [www.ace.orst.edu/info/nptn](http://www.ace.orst.edu/info/nptn).

**B. CHEMTREC (Chemical Transportation Emergency Center)** offers a 24 hours a day, seven days a week emergency phone service. In the event of an incident or accident involving pesticides, CHEMTREC is able to provide emergency response information pertaining to chemical spills. In emergency situations, call 1-800-424-9300. For non-emergency, general information or referrals, call 1-800-262-8200. Non-emergency telephones are staffed from 9:00 a.m. - 6:00 p.m., EST, Monday through Friday. They also maintain a web site at [www.chemtrec.org](http://www.chemtrec.org).

**6. COORDINATION WITH OTHER AGENCIES.** The application of economic poisons, either by surface vehicle or aerial applicator involves regulation by federal, state, and local authorities.

*A. Federal Authority.* At the federal level, there are the U.S. Department of Agriculture and the Environmental Protection Agency (EPA), and in cases involving national parks or preservations, the Department of Interior.

*B. State Authority.* Additionally, each state has requirements for the purchase, application, and disposal of chemicals used in agricultural operations. Each state has a testing and licensing requirement that each pesticide applicator must undergo before being allowed to operate within that state. This test may be administered by the state lead agency (usually the Department of Agriculture).

*C. Inspector Concerns.* The major concern of the inspector is in the area of flight operations associated with application of economic poisons. It is impractical for each inspector to become thoroughly familiar with all facets of agrichemical application and regulation.

(1) Questions concerning the handling, mixing, application ratios, or expiration dates of specific chemicals should be addressed to the state agency governing these areas.

(2) Federal Aviation Administration (FAA) inspectors should become familiar with the personnel responsible for operation and regulation of the Federal or State agencies who work with aerial application of chemicals. The expertise of these individuals will often assist the inspector in the certification, inspection, and surveillance of agricultural aircraft operators.

(3) All economic poisons are required to have a label. If an inspector encounters an economic poison during an accident investigation or an inspection, he or she can obtain important information from that label, including recommended container disposal, name of the chemical company, etc.

**7. OPERATING RULES.** Although operating rules for agricultural aircraft are specified in subpart C of part 137, the following are some additional considerations.

*A. Shoulder Harness.* During inspection for initial certification, the shoulder harness specified in 14 CFR § 137.31 (b) should be inspected for proper installation by an airworthiness inspector.

*B. Violations of §§ 137.37 and 137.39.* In cases involving alleged violations of §§ 137.37 and 137.39, the inspector should first seek the assistance of the state agriculture authority in establishing proof, such as residue testing, of such violation. The inspector could alternatively seek assistance from the county agent or equivalent representative of the U.S. Department of Agriculture, or the EPA. In certain violation cases involving alleged injury or hazard to the health of persons, assistance should be requested from the proper authorities.

*C. Personnel Duties and Responsibilities.* Personnel directly involved with agricultural aircraft operations ( flight and ground (loader) crew members) should be informed of their duties when performing agricultural operations. A record of each crew member's duty assignment, date of assignment (or termination) to duty, and a signed statement by the crewmember that they have been advised of their duties will show compliance with the requirements of § 137.41 (a).

*D. Proof of Property Interest.* Should a question arise concerning whether or not the private agricultural aircraft operator owns or holds a lease on property where he or she is conducting agricultural aircraft operations, the operator should be required to show the deed or agricultural use lease pertaining to the property where the application work is performed.

(1) The term "property interest in the crop" means bona fide legal interest, not one which was created for the purpose of avoiding the requirements of part 137. For example, a tenant farmer living on rented land, growing the crop and sharing the proceeds with

the owner, would normally have a bona fide property interest in the crop.

(2) For the purposes of this 14 CFR, any property interest should be evidenced by a legal, written instrument.

#### *E. Authorization from Air Traffic Control (ATC).*

When conducting dispensing or other agricultural operations (not including flights to and from a dispensing area) within the lateral boundaries of a surface area of Class D airspace designated for an airport, prior authorization must be obtained by contacting the ATC facility by aircraft radio, in person, or by telephone for receipt of the authorization.

*F. Deviation from Airport Traffic Patterns.* Pilots of agricultural aircraft may deviate from airport traffic patterns with the authorization of the control tower. At airports without control towers, the pilot may deviate from the traffic pattern if:

(1) Prior verbal coordination is made with the airport management. Written confirmation is not required.

(2) Deviations from the traffic pattern must be limited to agricultural aircraft operations.

(3) Landings and takeoffs should be made from runways or other areas of the airport so designated by airport management.

(4) The aircraft must at all times remain clear of and give way to aircraft conforming to the traffic pattern.

*G. Minimum Safe Altitudes - Other Than Congested Areas.* Title 14 CFR § 137.49 permits the operator to operate an aircraft in dispensing operations contrary to 14 CFR part 91 § 91.119 (Minimum safe altitudes: General), provided such operations are conducted without creating a hazard to persons or property on the surface and are in conjunction with aerial application activities. However flights between dispensing operations must comply with 14 CFR § 91.119. For example, the pilot of an agricultural aircraft dispenses an economic poison on a field adjacent to a farmhouse. The pilot may operate less than 500 feet above the surface or closer than 500 feet to the house provided the house or its occupants are not exposed to hazard from the aircraft or the chemicals.

*H. Considerations for Congested Area Determination.* The term congested area has been applied on a case by case basis since it was first used. No precise mathematical or geographic definition has been developed. The rule is clear that the congested area must be an area of a city, town, or settlement. However, some guidelines have been developed to assist in interpretation:

(1) The purpose of the rule is to provide minimum safe altitudes for flight and to provide adequate protection to persons on the ground. The following areas were determined to be congested by the Civil Aeronautics Board, in past cases:

(a) Approximately 10 houses and a school,

(b) the campus of a university,

(c) a crowded beach area along a highway, and

(d) a boy's camp where numerous people were on the docks and the shore.

(2) The presence of people is important to the determination of whether an area is "congested".

(3) The term is administered to prohibit over flights that cut the corners of large, heavily congested, residential areas.

(4) No definition has been constructed, which determines the allowable number of people, the amount of ground traffic, the proximity of buildings to each other, the number of buildings or residences, or other conditions that exist in a particular area, to both protect persons or property on the ground and allow agricultural aircraft operations to take place.

**8. LD<sub>50</sub> INDEX OF AGRICULTURAL CHEMICALS.** Chemicals may be toxic if encountered in excess of normal amounts. Agricultural chemicals in common use may be toxic to humans as well as to the insects, animals, and plants being controlled.

*A. Organic Phosphates.* One group of chemical compounds in agricultural use is organic phosphates (sometimes called organophosphates), derived from phosphoric acid. Some examples are parathion, phosdrin, and malathion. These are generally the most toxic of all pesticides and, therefore, pose the greatest hazard to those handling or dispensing them.

*B. Cumulative Toxic Effects of Organic Phosphates.* Nearly all pesticides can have a cumulative effect; that is, symptoms of poisoning occur grad-

usually over a period of time and can be confused with symptoms of other illnesses.

*C. LD<sub>50</sub> Index.* LD<sub>50</sub> index shows the comparative toxicity of the various chemicals and is available for the information and use of inspectors engaged in the certification and surveillance of agricultural aircraft operations. LD<sub>50</sub> is the symbol used to denote the number of milligrams of chemical per kilogram of body weight of laboratory animals (usually rats), a single dose of which killed half the animals tested. The higher the LD<sub>50</sub> value, the lower the toxicity and the safer the chemical. For example, a chemical with an LD<sub>50</sub> index of 15,000 is far less toxic than one with an index of 15.

## 9. HAZARDOUS MATERIAL TRAINING.

Common sense in the presence of agricultural chemicals is very important; therefore, inspectors should receive the following training before exposure to agricultural operators.

*A. General Aviation Operations Indoctrination.* This course deals, in part, with job functions which include agricultural certification areas and precautions concerning chemical toxicity.

*B. Agricultural Aircraft Operator Certification and Inspection.* This course provides 6 hours of instruction dedicated to the recognition of toxic chemicals, their labeling, and necessary precautions when performing job functions associated with agricultural operations. Included is detailed instruction on the hazards of chemicals used in agricultural operations.

*C. Other Sources.* Other FAA courses include information on hazardous material recognition and precautions. The latest version of FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting, contains considerable information of general use to FAA inspectors regarding hazardous materials. Also, most county agricultural commissions or similar state and local organizations offer "mini" courses on hazardous chemicals and precautions to be taken.

## 10. POSSIBLE HEALTH HAZARDS DURING AGRICULTURAL AIRCRAFT ACCIDENT INVESTIGATION.

Inspectors are normally required to place aircraft accident investigation duties above all other job functions. Because of this priority, it is not uncommon for an inspector to depart for the scene of an accident immediately after notification. In most instances, this is normal and proper. However, when

agricultural aircraft are involved, such action could prove to be dangerous.

*A. Pre-Investigation Information.* The inspector who departs for the scene of an agricultural aircraft accident without first finding out the nature of the pesticide, its hazards, and necessary precautions could be exposed to a serious health hazard. In this type of aircraft accident, a large amount of chemical may be concentrated in a small area, increasing the hazard to investigating inspectors.

*B. Inspector Precautions.* The following precautions are recommended regarding accident investigations which may involve agricultural materials.

(1) Determine from the operator, the persons for whom the operation was being conducted, the type, name, and EPA registration number of the material involved.

(2) With the above information call the nearest EPA office, poison control center, local agricultural commission officials, and/or the Pesticide Hotline to ask for guidance as to what precautions should be taken if an agricultural chemical is present. If advised to wear special gear such as protective clothing, goggles, gloves, breathing equipment, etc., ask the length of time it will take for the harmful characteristics of the pesticide to dissipate.

(3) Follow all instructions to the letter even if it means that on-the-scene investigation has to be postponed for several days.

(4) If special protective gear is needed or other precautions need to be taken, ensure that local law enforcement agencies are advised. Suggest that the scene of the accident be secured for the length of time special gear or precautions is needed.

*C. Coordination with Law Enforcement Agencies.* It is especially important that the inspector relay all the information received from EPA or a poison control center to the appropriate law enforcement agency. In most cases, law enforcement officers have already been at the accident scene and may need medical treatment.

**11. PROFESSIONAL AERIAL APPLICATION SUPPORT SYSTEM (PAASS).** PAASS is a program conducted by the National Agricultural Aviation Research & Education Foundation (NAAREF) designed to increase aviation safety and mitigate drift incidents within the agricultural aviation industry

through education and training. In addition to providing other education and training mediums, PAASS offers training programs held in conjunction with many of the state agricultural aviation association conventions throughout the country.

*A. PAASS Information.* For more information on the PAASS program contact NAAREF at 1005 E Street, S.E., Washington, D.C. 20003, (202) 546-5722.

*B.* Some regions are still holding programs and seminars for recurrent training, evaluating, and fine tuning procedures and techniques for controlling and mitigating spray drift. The program, known as Self-Regulated Application and Flight Efficiency (SAFE), may be conducted by state organizations as well as the NAAA.

*C. FAA Attendance.* While no formal attendance at PAAAS functions is required by Flight Standards District Office (FSDO) inspectors, field personnel may find it helpful to visit such events when they are announced and held within the area of geographical responsibility of the FSDO. When flight operations are conducted at events organized by PAAAS, waivers are not normally needed. In the past, during events such as SAFE programs attended by FAA representatives, no problems were observed with respect to maneuvering or non-participating aircraft. Operations at the clinics have been conducted in a highly organized and safe manner.

*D. National Agricultural Aircraft Association (NAAA) Handbook.* NAAA publishes a handbook which outlines, in detail, the concept of Operation SAFE and how to organize and conduct a clinic. Copies of this handbook are available from NAAA, 1005 E Street, S.E., Washington, DC 20003, (202) 546-5722.

*E. FAA Recommendations.* Based on the experience gained in the initial sessions of Operation SAFE and PAAAS, the following recommendations are provided:

(1) No waiver is necessary for flight operations or maneuvers involved.

(2) A Notice to Airman (NOTAM) may be necessary if the operations are conducted at a public-use airport. The wording should alert the transient pilot

that "simulated agricultural dispensing operations are being conducted alongside runway [number]."

*F. FAA Comments.* FAA comments and recommendations regarding the conduct of Operation SAFE sessions, the contents of the NAAA handbook, or the PAAAS program should be directed to FAA, Flight Standards Service, AFS-820, 800 Independence Ave., S.W., Washington, DC, 20591.

**12. RENEWAL, AMENDMENT, CANCELLATION.** An agricultural aircraft operator's certificate is effective until it is surrendered, suspended, or revoked. A currently effective certificate which has been lost or destroyed shall be replaced, upon written request from the operator, by the certificate-holding district office (CHDO). The replacement certificate will duplicate the lost or destroyed certificate. The replacement will have the word **duplicate** placed on it and the date of its preparation indicated. The certificate will be signed by the district office manager (figure 115-1).

*A. Renewals.* Not applicable to part 137 certificates.

*B. Amendments.* An agricultural aircraft operator may apply to amend the operating certificate.

(1) If an operator desires to have the prohibition against dispensing economic poisons added to or removed from the operating certificate, the operator should apply on FAA Form 8710-3, Agricultural Aircraft Operator Certificate Application, in the same manner as for an original certificate (figure 115-2). The same procedure should be followed in applying for other changes on the Agricultural Aircraft Operator Certificate. If the application for amendment is denied, the applicant shall be advised in writing of the reason for denial (figure 115-3).

(2) The FAA may also amend an agricultural aircraft operator's certificate as a result of actions taken under Title 49 of the United States Code (49 U.S.) and 14 CFR part 13.

*C. Cancellation.* The FAA may suspend or revoke an agricultural operator's certificate.

(1) In the case of a voluntary surrender (e.g., when the operator decides to cease agricultural operations or to have the certificate held by the FAA pending enforcement proceedings), the operator must, as soon as possible, return the certificate by mail

(registered preferred) or in person to the district office having jurisdiction over the certificate.

(2) In the case of suspension or revocation of the certificate (e.g., as a result of an FAA enforcement action), the operator must, as soon as possible, return the certificate in a manner agreed to by the regional counsel.

(3) If the operator fails to meet the certification requirements of 14 CFR § 137.19(e) (e.g., does not have at least one aircraft equipped for agricultural operations), the FAA may revoke or suspend the certificate until the aircraft meets certification requirements. Discretion may be allowed if the aircraft is temporarily out of service while undergoing maintenance, etc.

**FIGURE 115-1  
SAMPLE DUPLICATE CERTIFICATE**

---



US Department  
of Transportation  
**Federal Aviation  
Administration**

## Operating Certificate

This certifies that

[Enter company name]  
[Enter address of principal base of operations]

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein, for the issuance of this certificate and is authorized to operate as an Air Operator and conduct

[Enter, Commercial or Private Agricultural Aircraft Operations]

in accordance with said Act and the rules, regulations, and standards;

[Enter, Dispensing of Economic Poisons Allowed or Dispensing of Economic Poisons Prohibited as appropriate]

This certificate is not transferable and, unless canceled, suspended, superseded, surrendered or revoked, shall continue in effect

[Enter the word, indefinitely]

By Direction of the Administrator

Certificate number: [Enter certification number  
obtained from AFS-620]

\_\_\_\_\_  
[District office manager signs]  
(Signature)

Effective Date: [Enter date certification  
was completed]

\_\_\_\_\_  
[District office manager's title]  
(Title)

Issued at: [ESDO, city & state]

**FIGURE 115-2**  
**SAMPLE AMENDED CERTIFICATE**



## Operating Certificate

This certifies that

[Enter company name]  
[Enter address of principal base of operations]

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein, for the issuance of this certificate and is authorized to operate as an Air Operator and conduct

[Enter, Commercial or Private Agricultural Aircraft Operations]

in accordance with said Act and the rules, regulations, and standards;

[Enter, Dispensing of Economic Poisons Allowed or Dispensing of Economic Poisons Prohibited as appropriate]

This certificate is not transferable and, unless canceled, suspended, superseded, surrendered or revoked, shall continue in effect

[Enter the word, indefinitely]

By Direction of the Administrator

Certificate number: [Enter number from original certificate]  
Effective Date: [Enter original certificate date; beneath the line, enter, Amended on: and enter the date of the amendment]

\_\_\_\_\_  
[District office manager signs]  
(Signature)

\_\_\_\_\_  
[District office manager's title]  
(Title)

Issued at: [ESDO, city & state]



**FIGURE 115-3**  
**LETTER ADVISING APPLICANT OF REASONS FOR DENYING AMENDMENTS**

---

[*FAA Letterhead*]

[*Date*]

[*Operator's name and address*]

Dear [*operator's name*]:

We are returning your application for amendment of your commercial agricultural operator's certificate. Your request to add the dispensing of economic poisons is denied because your personnel, [*personnel names*], failed to meet the knowledge requirements of 14 CFR § 137.19 regarding economic poisons.

We will be happy to accept a new application and reexamine [*personnel names*] after these deficiencies have been corrected.

Sincerely,

[*District Office Manager's signature*]

**[THIS PAGE INTENTIONALLY LEFT BLANK]**